

Appln. No.: 10/813,372
Amendment Dated November 1, 2006
Reply to Office Action of August 1, 2006

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MATG-395US

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Remarks/Arguments:

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Pending Claims

Claims 1-19, 21-24, and 84 are pending. Claim 20 is currently withdrawn. Claims 25-83, 85, and 86 have been canceled.

At least claim 1 is generic to all of the species recited in claim 20. Accordingly, if claim 1 is allowed, Applicants respectfully request that all of the species of claim 20 be rejoined to the application.

Claim Objections

Applicants appreciate the Examiner's statement that claims 4, 5, and 10 would be allowable if rewritten in independent form. Claims 4, 5, and 10 have been amended to be written in independent form.

Claim Rejections

Claims 1-3, 6, 8, 9, 11, 12, and 18 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Kley et al. (WO 01/03157). Claims 7 and 13 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kley et al. Applicants respectfully submit that claims 1-3, 6-9, 11-13, and 18 are not subject to these rejections for the reason set forth below.

Kley et al. disclose an object inspection and modification system and method that may include a number of different types of scanning probe microscope (SPM) elements, including an NSOM probe. Kley et al. disclose that the NSOM probe may be used to profile the surface of an object and that the disclosed system may then be used to modify the surface. At page 11, lines 29-39, Kley et al. disclose that the types of surface modifications "...may be simply to remove particle contaminants on the surface or more importantly to structurally and/or chemically modify the material of the object by removing, deforming, and/or chemically changing a portion of it or adding other material to it." Kley et al. then list a number of specialized SPM probes that may be used to perform these modifications. Page 11, line 35-39.

Kley et al. do not disclose or suggest a feature recited in claim 1, as amended, of the present application, namely:

...f) machining the top surface of the microstructure device preform using light from the micro-machining laser coupled through the NSOM

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probe to form the at least one fine feature on the existing feature, completing the microstructure device. (Emphasis added.)

This feature of the present invention is described in the specification at paragraphs [0064] and [0065]. The present invention, as recited in claim 1, as amended, specifically uses laser light coupled through the NSOM probe to machine the surface of the microstructure device.

As discussed above, Kley et al. disclose an object inspection and modification system that includes a number of different types of SPM elements. Kley et al. also disclose using this system to profile a surface with an NSOM probe and then to modify the surface with one of the SPM elements. However, Kley et al. imply that the probes used to modify a surface are generally distinct from those, such as NSOM probes, that are used to profile the surface. Page 11, lines 30-32, and page 11, line 39, through page 12, line 5. Further, Kley et al. do not disclose the use of any probe that may perform laser machining in their list of SPM elements used to modify a surface, nor do they disclose the use of a micro-machining laser in the cited reference or in any of the PCT applications referenced therein (page 12, lines 1-5) as disclosing SPM probes that may be used to modify surfaces.

Because Kley et al. do not disclose or suggest these features of claim 1, as amended, claim 1 can not be subject to rejection under 35 U.S.C. § 102(b) as anticipated by Kley et al., nor is claim 1 subject to rejection under 35 U.S.C. § 103(a) as being unpatentable over Kley et al. As claims 2, 3, 6-9, 11-13, and 18 depend from claim 1; these claims are not subject to these rejections as well.

Claims 14-17 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kley et al. in view of Liu et al. (US 6,720,519). Claim 19 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kley et al. in view of Weber (US 5,597,643). Claims 21, 22, and 84 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kley et al. in view of Kubena et al. (US Pat. Publ. No. 2005/0269901). Claims 23 and 24 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kley et al. in view of In view of Li et al. (US 6,947,649). Applicants respectfully submit that claims 14-17, 19, 21-24, and 84, as amended, are not subject to these rejections for the reason set forth below.

Liu et al., Weber, Kubena et al., and Li et al. all disclose free-space laser machining systems and methods. None of these references discloses or suggests "...using light from [a] micro-machining laser coupled through [an] NSOM probe..." to machine a surface.

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Thus, Lui et al., Weber, Kubena et al., and Li et al. are unable, singly or in combination, to overcome the deficiencies of Kley et al., with regard to claim 1, described above. As claims 14-17, 19, 21-24, and 84 depend from claim 1; these claims are allowable over Kley et al. in view of Lui et al., Weber, Kubena et al., and/or Li et al. for at least this reason.

Conclusion

In view of the foregoing amendments and remarks, Applicants request that the Examiner reconsider and withdraw the rejection of claims 1-19, 21-24, and 84. Applicants also request the rejoinder and consideration of claim 20.

Respectfully submitted,



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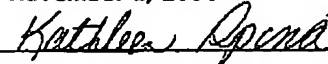
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